Original article

Racial origin, sexual lifestyle, and genital infection among women attending a genitourinary medicine clinic in London (1992)

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Objectives: To compare variables of sexual behaviour and incidence of genital infections among women of different racial origins and lifestyles.
Design: A prospective cross sectional study of sexual behaviour reported by a standardised self administered questionnaire in new patients who presented for screening and diagnosis.
Setting: A genitourinary medicine clinic in west London.
Subjects: 1084 consecutive women newly attending in 1992.
Main outcome measures: Variables relating to sociodemographic status, sexual lifestyle, condom use, sexually transmitted diseases, and other genital infections stratified by racial origin.
Results: There were 948 evaluable women, of whom 932 (98.3%) were heterosexual and 16 (1.7%) were lesbian. Previous heterosexual intercourse was reported by 69% of lesbian women and their most frequent diagnosis was bacterial vaginosis (38%). The majority of heterosexual women were white (78%) and 16% were black. The black women were more likely to be teenagers (18% cf 8%; p=0.0004) or students (28% cf 15%; p=0.0008), and to have had an earlier coitarche (48% cf 38% before aged 17; p<0.004). They also had a higher proportion of pregnancies (58% cf 38%; p<0.00001) and births (38% cf 20%; p<0.00001). The white women showed significantly more sexual partners during the preceding year (p=0.004) and in total (p<0.00001) and more reported non-regular partners (48% cf 35%; p=0.004) with whom they were more likely to use condoms (p=0.009). However, the black women were more likely to have gonorrhoea (7% cf 2% p<0.0003), chlamydial infection (12% cf 5% p<0.002), trichomoniasis (10% cf 2% p<0.00001), or to be sexual contacts of men with non-gonococcal urethritis (19% cf 12% p<0.02). They were less likely to have genital warts (3% cf 12% p=0.002). Logistic regression showed that all these variables were independently associated with the black women. The Asian women (2%), none of whom had a sexually transmitted disease, had commenced intercourse later (mean 19.7 years) than both black women (mean 16.8 years) and white women (mean 17.6 years).
Conclusions: Sexual intercourse commenced approximately 1 year earlier in the black women, who were more likely to have become pregnant, had children, and to have acquired a bacterial sexually transmitted infection than were the white women.
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Keywords: race; sexual lifestyle, genital infection; women; genitourinary medicine clinic; London

Introduction

Differences in sexual behaviour and its consequences between people of different racial origins and sexual lifestyles have received comparatively little attention. The National Survey of Family Growth (NSFG) in 1982 found that black women had sexual intercourse earlier than white women in the United States.[1] In England, the National Study of Sexual Attitudes and Lifestyles (NATSSAL) in 1990–1 showed no significant difference between white and black women, but the same survey found that Asian women reported first intercourse much later than white.[2] A study from this department in 1990 showed that coitarche was significantly associated with socioeconomic status, defined by occupation, as well as with racial origin, but possible confounding between these two variables was not explored.[3] Women who practise homosexual activity (usually called lesbian), have received least attention of all with respect to their prevalence and behaviourally related morbidity. This study looked at newly attending female patients in 1992, by when condom use and safer sexual practices had been intensively advocated by national sexual health campaigns for more than 5 years.

Methods

These have been described elsewhere.[4] Sociodemographic data, including racial grouping, were taken from the standardised registration form completed by all new patients. Sexual behaviour data were obtained from a standardised self administered questionnaire. The first part dealt with testing and risks for HIV infection. In the second part, questions on sexual behaviour concerned age at menarche and coitarche, numbers of sexual partners in the previous year, and total lifetime partners, the practices of anal and oral intercourse (fellatio), both without and with ejaculation, condom use with regular and non-regular partners (the latter to be answered only if applicable), frequency of vaginal intercourse, and cigarette smoking. Excluded were infants, children, and the non-English speaking.

Patients were routinely screened for sexually transmitted infections (STIs) and other genital

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infections subject to consent. Standard diagnostic criteria were employed with confirmation by culture for gonorrhoea, chlamydial infection, trichomoniasis, candidosis, and herpetic infection. The diagnosis of contact with non-gonococcal urethritis (NGU contact) was epidemiological. Bacterial vaginosis was diagnosed on the presence of symptoms, vaginal pH below 5 and finding clue cells on microscopy. All patients were screened for syphilis by serological tests (VDRL and TPHA).

Data analysis was carried out with SPSS-X software on a Sun4/670 computer and STATA 4.0 on a microcomputer. χ^2 tests for homogeneity and trend were used to assess the significance of differences between white women and black women, using Yates's correction when there was only one degree of freedom. Multivariate analysis (logistic regression) was used to adjust for age and social class differences between the white and black subjects. The STATA program gives p values to three decimal places.

Results

Between February and August 1992, 1084 consecutive newly attending women were eligible for the study. Of these, 16 (1.5%) refused the questionnaire and four (0.4%) did not respond to all the questions. A further 110 women (10%) had to be excluded from the study because they declined examination and screening for STIs; two were lesbian. Racial origin was not recorded by six women. Of the remaining 948, 932 (98.3%) were heterosexual and 16 (1.7%) were lesbian. Only one of the lesbians was non-white and she reported being of other racial origin. Among the heterosexual women 731 (78.4%) were white; of the white women 610 (83.4%) were white European, 61 (8.3%) were white Australian, and 45 (6.2%) were white American; no other group formed more than 1%. One hundred and fifty two women (16.3%) were black; of the black women, 112 (73.7%) were black European, 19 (12.5%) were black Caribbean, 13 (8.6%) were black African, and eight (5.3%) were black American. Twenty women (2.1%) were Asian, nine (1%) were Chinese, and 20 (2.1%) were unclassifiable.

SOCIODEMOGRAPHIC VARIABLES

The mean age of the black women (25.7 years) was approximately 18 months younger than the white women (27.3 years), but the median age of both groups was 25 years. This was due to the significantly greater proportion of teenagers (p=0.0004) (table 1).

Socioeconomic class differed in the smaller number of professional women (p<0.0002) and the greater proportion of students (p=0.0008) in the black group.

MENARCHE, CONTRACEPTION, AND PREGNANCY

Menarche occurred significantly earlier in the black women (table 1): 70.5% of black women reported menarche before the age of 14, compared with 60.8% of white women (p=0.03). Mean age at menarche was 13.2 years for white and 12.9 years for black.

Contraception was not used by 31.3% of the black women compared with 22.0% of the white women (p=0.01). The difference in terms of pregnancies was even more marked (table 1). There had been a previous pregnancy in 57.6% of black women compared with 38.0% of white women (p=0.00001). Births were reported in 38.4% of the black group compared with 19.8% of the white women (p<0.00001).

SEXUAL BEHAVIOUR

Age at first intercourse was significantly earlier among black women (p<0.0001). This applied to intercourse before the age of 16 (p=0.01), before the age of 17 (p<0.004), and before the age of 18 (p=0.0002). Mean age at coitarche was 17.6 years for white and 16.8 years for black.

There was a significant difference between the two groups in the number of sexual partners reported in the previous year (p=0.004) and lifetime total numbers of sexual partners (p<0.0001): 56.4% of white women had more than five sexual partners compared with only 32.9% of black women (table 2). Frequency of vaginal intercourse was similar in the two groups.

Fellatio was much more likely to be reported by white women, among whom 88.4% had practised oro-penile insertion and 57.8% intraoral ejaculation (p<0.00001). Anal penetration was more frequent among white women (p<0.003), but anal ejaculation was reported by proportions which did not show significant difference.

Black women were significantly less likely to report non-regular partners. Only 34.9% of black women had non-regular partners, compared with 47.9% of white women (p=0.002). However, black women used condoms less with their non-regular partners than white women (p=0.009).

CIGARETTE SMOKING

There was no difference between white and black groups in the proportion of women who were non-smokers (table 1). However, among the half who did smoke, white women smoked significantly more heavily than black women (p=0.0004).

GENITAL INFECTION

Patterns of genital infection differed markedly between the two groups of women (table 3). Black women were much more likely to suffer from gonorrhoea (p<0.0003), trichomoniasis (p<0.0001), chlamydial infection (p<0.002), bacterial vaginosis (p<0.004), and to present as sexual contacts of non-gonococcal urethritis (p<0.02). Genital warts were found more frequently in white women (p=0.002). There was no difference in the incidence of vaginal candidosis or genital herpes between the two groups. Comparison with our findings in 1982 (table 3) shows that chlamydial infection, contact with NGU and genital warts had declined less or not at all in

black women, but had all fallen significantly in white women. No woman had syphilis.

HIV TESTING AND INFECTION RISK

Consent for HIV testing was obtained from similar proportions of both white and black women (table 1). Risks for HIV infection differed in two respects: black women were more likely to have had heterosexual intercourse with an African ($p<0.00001$) and white women were more likely to have had heterosexual intercourse with an injecting

Table 1 Racial origin, sociodemography, and sexual behaviour: women, 1992

Variables	*Racial origin*				
	White (n=731)	*Black (n=152)*	χ^2	*p Value*	*Adjusted p value*
Age (years):					
Under 20	59 (8.1%)	27 (17.8%)	12.4	*0.0004*	*<0.001*
20–24	258 (35.3%)	40 (26.3%)			
25–29	214 (29.3%)	49 (32.2%)	χ^2_T=0.1	0.8	
30–39	145 (19.8%)	29 (19.0%)			
40 and over	55 (7.5%)	7 (4.6%)			
Marital status:	n=721	n=145			
Single	576 (79.9%)	128 (88.3%)	5.0	*0.02*	0.9
Married	94 (13.0%)	16 (11.0%)	0.3	0.6	0.4
Separated/divorced	50 (6.9%)	1 (0.7%)	7.4	*0.007*	*0.02*
Socioeconomic class:	n=668	n=130			
Professional	184 (27.5%)	15 (11.5%)	14.1	*<0.0002*	*0.001*
White collar	164 (24.6%)	37 (28.5%)	0.7	0.4	*0.01*
Blue collar	123 (18.4%)	15 (11.5%)	3.1	0.08	0.8
Unemployed	86 (12.9%)	25 (19.3%)	3.2	0.08	0.7
Student	101 (15.1%)	36 (27.7%)	11.2	*0.0008*	*0.001*
Contraception:	n=726	n=150			
None	160 (22.0%)	47 (31.3%)	5.4	*0.02*	0.09
The pill	301 (41.5%)	58 (38.7%)	0.3	0.6	0.8
IUCD	29 (4.0%)	8 (5.3%)	0.3	0.6	*0.03*
Condoms	152 (20.9%)	23 (15.3%)	2.1	0.1	*0.04*
Cap	39 (5.4%)	2 (1.3%)	3.7	0.05	<0.2
Parity:	n=698	n=151			
Past pregnancy	265 (38.0%)	87 (57.6%)	18.9	*0.00001*	*<0.001*
Full term pregnancy	138 (19.8%)	58 (38.4%)	23.3	*<0.00001*	*<0.001*
Smoking (no of cigarettes):	n=731	n=152			
Nil	370 (50.6%)	70 (46.1%)	0.9	0.4	0.3
1–10/day	157 (21.5%)	61 (40.1%)	22.6	*<0.00001*	*0.04*
>10/day	204 (27.9%)	21 (13.8%)	12.4	*0.0004*	0.06
Menarche (years):					
9–11	102 (14.0%)	32 (21.1%)			
12	146 (20.0%)	32 (21.1%)			
13	196 (26.8%)	43 (28.3%)	χ^2_T=4.4	*0.04*	0.8
14	143 (19.6%)	15 (9.9%)			
15–18	144 (19.7%)	30 (19.7%)			
Coitarche (years):					
6–15	120 (16.4%)	39 (25.7%)			
16	141 (19.3%)	35 (23.0%)			
17	152 (20.8%)	37 (24.3%)	χ^2_T=16.6	*<0.0001*	*<0.001*
18	116 (15.9%)	19 (12.5%)			
19–30	202 (27.6%)	22 (14.5%)			
Partners in past year:					
0–1	354 (48.4%)	86 (56.6%)			
2	201 (27.5%)	45 (29.6%)	χ^2_T=8.6	*0.004*	*0.02*
3–5	151 (20.7%)	19 (12.5%)			
>5	25 (3.4%)	2 (1.3%)			
Partners in lifetime:					
1	46 (6.3%)	19 (12.5%)			
2–5	273 (37.3%)	83 (54.6%)			
6–10	219 (30.0%)	35 (23.0%)	χ^2_T=41.2	*<0.00001*	*<0.001*
11–20	128 (17.5%)	11 (7.2%)			
>20	65 (8.9%)	4 (2.8%)			
Vaginal intercourse:					
<1/week	182 (24.9%)	48 (31.6%)			
1–3/week	338 (46.2%)	72 (47.4%)	χ^2_T=5.0	*0.03*	*0.04*
>3/week	211 (28.9%)	32 (21.0%)			
Oral intercourse:					
Fellatio					
insertion	646 (88.4%)	78 (51.3%)	114.5	*<0.00001*	*<0.001*
ejaculation	423 (57.8%)	37 (24.3%)	55.3	*<0.00001*	*<0.001*
Anal intercourse:					
insertion	163 (22.3%)	17 (11.2%)	8.9	*<0.003*	*0.003*
ejaculation	89 (12.2%)	11 (7.3%)	2.6	0.1	*0.01*
Condom use:					
Regular partners	n=729	n=152			
Never	292 (40.1%)	65 (42.8%)			
Occasionally/often	350 (48.0%)	79 (51.9%)	χ^2_T=2.6	0.1	0.3
Always	87 (11.9%)	8 (5.3%)			
Non-regular partners	n=350 (47.9%)	n=53 (34.9%)	8.2	*0.004*	
Never	62 (17.7%)	18 (34.0%)			
Occasionally/often	130 (37.1%)	18 (34.0%)	χ^2_T=6.9	*0.009*	*<0.04*
Always	158 (45.1%)	17 (32.1%)			
Risks for HIV infection:	n=730	n=152			
Injecting drug user (IDU)	8 (1.1%)	1 (0.7%)	0.0	1.0	0.8
Heterosexual intercourse:					
with IDU	32 (4.4%)	1 (0.7%)	3.9	*<0.05*	0.6
with bisexual	22 (3.0%)	2 (1.3%)	0.8	0.4	0.2
with African	23 (3.2%)	23 (15.1%)	34.5	*<0.00001*	*<0.001*

drug user (p<0.05). No woman tested positive.

MULTIVARIATE ANALYSIS

In view of the highly significant differences between black and white women on univariate analysis, the data were analysed by logistic regression. Adjusted p values are shown in tables 1 and 3. Earlier menarche, less use of contraception, and a higher incidence of bacterial vaginosis did not survive as independently associated with black race. This may have resulted from the excess of teenagers in the black group or differences in socioeconomic class structure.

ASIAN WOMEN

Although the number of Asian women was small, many of their characteristics differed from those of white women or black women: their mean age was 29.9 years (median 31; range 19–51 years) and 60% of the 20 were single and 30% married. Mean age at menarche was 12.7 years (table 2), very similar to that of black women (12.9 years), but coitarche was considerably later with mean age 19.7 years, compared with 16.8 years for black women (p = 0.003). Only 30% of Asian women reported coitarche before 18 years of age compared with 56% of white women (p=0.03) and 73% of black women (p=0.0003). Numbers of sexual partners in the preceding year were similar to the other groups with a median of one (table 2), but total partners were significantly less (p = 0.003). Ninety per cent of Asian women practised oral penetration and 25% anal penetration, much the same as white women. Only 20% had non-regular partners, a much smaller proportion than either white or black women. Condom use with regular partners was more frequent, only 30% never using them and 20% always using them. The median frequency of vaginal intercourse was weekly compared with two or three times a week in the other two groups. Seventy five per cent of the Asian women were non-smokers and none of them had gonorrhoea, chlamydial infection, or trichomoniasis. The most common genital infections were vaginal candidosis (40%) and bacterial vaginosis (10%). Only one presented as a contact of NGU. Urinary tract infection or other diagnoses were made in 35%.

LESBIAN WOMEN

The 16 lesbians (1.7%) were of mean age 28.1 years, median 27 years, range 20–42 years. Eleven (68.8%) reported heterosexual intercourse between 7 months and 15 years previously. Six women (37.5%) had bacterial vaginosis, one woman (6.3%) had vaginal candidosis, and nine women (56.3%) had no infection detected. Cervical cytology was negative in 12 (75%), two (12.5%) showed severe inflammatory changes (SIC), and one (6.3%) had severe dyskaryosis found on biopsy to be CIN3.

Table 2 Racial origin, coitarche, and sexual partners: women, 1992

	Age at coitarche (years)									
Racial origin	*<13*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*>20*
White*† (n=731)	3 (0.4%)	8 (1.1%)	40 (5.5%)	69 (9.4%)	141 (19.3%)	152 (20.8%)	116 (15.9%)	59 (8.1%)	44 (6.0%)	99 (13.5%)
Black*‡ (n=152)	1 (0.7%)	4 (2.6%)	12 (7.9%)	22 (14.5%)	35 (23.0%)	37 (24.3%)	19 (12.5%)	5 (3.3%)	7 (4.6%)	10 (6.6%)
Asian†‡ (n=20)	0	0	0	1 (5.0%)	2 (10.0%)	3 (15.0%)	3 (15.0%)	1 (5.0%)	3 (15.0%)	7 (35.0%)
*χ^2_T=17.6, p=<0.0001 †χ^2_T=9.7, p=0.002 ‡χ^2_T=22.5, p<0.0001										
	Sexual partners in past year									
	0	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*>8*
White*† (n=731)	16 (2.2%)	338 (46.2%)	201 (27.5%)	100 (13.7%)	39 (5.3%)	12 (1.6%)	14 (1.9%)	5 (0.7%)	2 (0.3%)	4 (0.6%)
Black*‡ (n=152)	3	83 (2.0%)	45 (54.6%)	13 (29.6%)	4 (8.6%)	2 (2.6%)	0 (1.3%)	0	0	2 (1.3%)
Asian†‡ (n=20)	2	11 (10%)	3 (55.0%)	3 (15.0%)	0 (15.0%)	0	0	0	0	1 (5.0%)
*χ^2_T=5.0, p=0.03 †χ^2_T=0.4, p=0.5 ‡χ^2_T=0.04, p=0.8										
	Total sexual partners									
	1	*2*	*3*	*4*	*5*	*6–7*	*8–10*	*11–20*	*21–50*	*>50*
White*† (n=731)	46 (6.3%)	58 (7.9%)	82 (11.2%)	72 (9.9%)	61 (8.3%)	95 (13.0%)	124 (17.0%)	128 (17.5%)	55 (7.5%)	10 (1.4%)
Black*‡ (n=152)	19 (12.5%)	18 (11.8%)	25 (16.4%)	25 (16.4%)	15 (9.9%)	24 (15.8%)	11 (7.2%)	11 (7.2%)	2 (1.3%)	2 (1.3%)
Asian†‡ (n=20)	6 (30%)	3 (15.0%)	0	3 (15.0%)	1 (5.0%)	2 (10.0%)	3 (15.0%)	2 (10.0%)	0	0
*χ^2_T=38.6, p<0.0001 †χ^2_T=8.9, p=0.003 ‡χ^2_T=0.5, p=0.5										

Table 3 Racial origin and genital infections: women 1982 and 1992

	Racial origin								
Genital infections	*1982 White (n=873)*	*Black (n=131)*	*χ^2*	*p Value*	*1992 White (n=731)*	*Black (n=152)*	*χ^2*	*p Value*	*Adjusted p value*
Gonorrhoea	57 (6.5%)	21 (16.2%)	13.1	*0.0003*	12 (1.6%)	11 (7.2%)	13.4	*<0.0003*	*0.001*
Chlamydial infection	145 (16.6%)	27 (20.8%)	1.0	0.3	35 (4.8%)	18 (11.8%)	9.9	*<0.002*	*<0.02*
NGU contact	218 (25.0%)	25 (19.2%)	1.8	0.2	87 (11.9%)	29 (19.1%)	5.1	*<0.02*	*0.04*
Trichomoniasis	72 (8.3%)	27 (20.8%)	18.2	*<0.0001*	11 (1.5%)	15 (9.9%)	27.9	*<0.00001*	*0.001*
Bacterial vaginosis	35 (4.0%)	4 (3.1%)	0.1	0.8	58 (7.9%)	24 (15.8%)	8.3	*<0.004*	0.07
Vaginal candidosis	196 (22.5%)	32 (24.6%)	0.2	0.7	232 (31.7%)	56 (36.8%)	1.3	0.3	0.5
Genital herpes	53 (6.1%)	4 (3.1%)	1.4	0.2	54 (7.4%)	6 (3.9%)	1.8	0.2	0.6
Genital warts	60 (6.9%)	5 (3.8%)	1.3	0.3	88 (12.0%)	5 (3.3%)	9.3	*0.002*	*0.001*
NAD	212 (24.3%)	20 (15.4%)	4.7	*<0.03*	226 (30.9%)	31 (20.4%)	6.3	*0.01*	*0.02*

Discussion

The national study of sexual attitudes and lifestyles (NATSSAL) carried out in 1990–1 found that 0.8% of women aged 25–34 years reported a female sexual partner in the previous 5 years and 2.0% ever in their lives.[2] Our figure of 1.7% in a clinic population showed proportional representation of this group. We found that the majority of lesbian women (69%) had practised heterosexual intercourse and were therefore exposed to chronic virus related STIs. Nevertheless, their pattern of disease was quite different from that of heterosexual women. Thirty eight per cent had bacterial vaginosis and 56% had no genital infection detected. Our sample was too small to draw conclusions about cervical morbidity, but it is possible that this was heterosexually acquired.

There were highly significant differences between white and black heterosexual women. Earlier coitarche in black women probably accounted for the higher proportion of teenagers and students in our study group. Similar differences have been reported from the United States in respect of both menarche and first intercourse. Mean age at menarche in the 1970s was 12.7 years for whites and 12.5 years for blacks.[1] In a more recent sample of adolescent women from Los Angeles in the 1980s, Wyatt reported first coitus at mean age of 17.2 years for white women and 16.7 years for Afro-American women.[5] A study of college students in the southern United States by Johnson *et al* found less oral and anal intercourse and fewer genital warts in black women, but more gonorrhoea, syphilis, and HIV infection.[6] Our findings were similar apart from the latter two infections, which have a low prevalence among heterosexuals in the United Kingdom, and certainly suggest that our black population are at potentially equal risk in view of their significantly more frequent sexual relationships with Africans ($p<0.00001$).

The 1991 census showed that racial mix in our local health district (Ealing, Hammersmith, and Hounslow) varied between the boroughs with the ranges 67.7–82.5% for whites, 2.7–10.2% for blacks, 4.2–21.8% for Asians, and 0.7–0.9% for Chinese.[7] The proportions of white and Chinese women attending our clinic fell within these ranges, but the proportion of black women at 16.4% was above and the proportion of Asian women at 2.1% was below the local population level.

Although many aspects of sexual behaviour are similar to those we found in our first study in 1982,[8] there have been important changes during the intervening decade.[9] Menarche and coitarche were reported significantly earlier in black women than in white women, which was not the case in 1982. In line with the overall trend in London, the incidence of gonorrhoea, trichomoniasis, and chlamydial infection all fell but black women attending as contacts of non-gonococcal urethritis remained unchanged at 19%. Whereas there was no significant difference in the incidence of chlamydial infection between black and white women in 1982, this was no longer the case in 1992 with chlamydial infection much commoner in black women ($p<0.002$). On the other hand, the incidence of genital warts in black women remained unchanged at 4% between 1982 and 1992, but the incidence in white women was significantly higher at 12% in 1992 compared with 7% in 1982 ($p=0.0007$). In 1982, black women reported significantly fewer sexual partners and this was still the case in 1992.

During the decade 1982–92, the overall use of condoms dramatically increased.[6] However, this change was less among black women than among white women for both regular and non-regular partners and at the same time the decline in bacterial STIs lagged behind that of white women. We have shown previously that increasing condom usage with regular partners is accompanied by a decreasing incidence of bacterial sexually transmitted infections.[4] There is thus strong evidence that condoms prevent transmission of some but not all STIs and the results of our study indicate that measures to promote condom usage by black women need further effort. Contraceptive practice generally was also least developed in black women: no less than 58% had been pregnant ($p<0.0001$) and 38% had given birth ($p<0.0001$), nearly double the proportion of white women, and 31% used no contraception ($p=0.02$).

Our study has shown that racial origin is independently linked to sexual behaviour and the incidence of sexually transmitted diseases. It emphasises the importance of knowing the racial mix in the analysis and interpretation of sexual behaviour studies and data on the prevalence of STI. Among women attending a genitourinary medicine clinic in London, those of Asian origin were underrepresented, older, had later coitarche, and none of them had an STI. By contrast, those of black race were disproportionately overrepresented, were younger, commenced intercourse earlier, used condoms less frequently with non-regular partners, and were more liable to become pregnant and to acquire bacterial STIs. Despite this, the black women had fewer sexual partners. The explanations for these findings are beyond the scope of this paper. However, all the STIs found more frequently in the black women are of bacterial origin and can be eliminated by antimicrobial treatment.

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